

/ Descriptions

TO-263

Schottky Barrier Diode in a TO-263 Plastic Package.

/ Features

Low forward voltage drop, low power losses High efficiency operation.

/ Applications

OR-ing

DC-DC

For use in solar cell junction box as a bypass diode for protection, For use in high frequency inverters, switching power supplies, freewheeling diodes, OR-ing diode, dc-to-dc converters and reverse battery protection.

/ Equivalent Circuit**/ Pinning**

PIN1 Anode

PIN 2 4 Cathode

PIN 3 Anode

/ h_{FE} Classifications & Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	V
Maximum RMS Voltage	V_{RMS}	31.5	V
Maximum Average forward current	$I_{F(AV)}$	30	A
Non Repetitive Peak Surge Current	I_{FSM}	350	A
Thermal Resistance Junction to Case	R_{Jc}	1.6	/W
Operating junction and storage temperature range (AC mode)	T_j, T_{stg}	-65 +150	
Junction temperature in DC forward current without reverse bias, t 1 h	$T_j \text{ max. }^{(1)}$	200	

/Notes

1 In accordance with the IEC 61215 Ed.2 bypass diode heating test standard, tested under forward DC condition, no reverse voltage drop was applied, the power up time is less than 1H. bypass diode thermal test DC forward current without reverse bias.

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Breakdown voltage	V_{BR}	$I_R = 500 \mu A$	50			V
Forward Voltage	V_F Note 1	$I_F = 15A (T_A = 25^\circ C)$		0.45	0.50	V
		$I_F = 30A (T_A = 25^\circ C)$		0.50	0.54	V
		$I_F = 15A (T_A = 125^\circ C)$			0.40	V
		$I_F = 30A (T_A = 125^\circ C)$			0.50	V
Instantaneous Reverse Current	I_R Note 2	$V_R = 45V (T_A = 25^\circ C)$			100	A
		$V_R = 45V (T_A = 125^\circ C)$			50	mA

/Notes

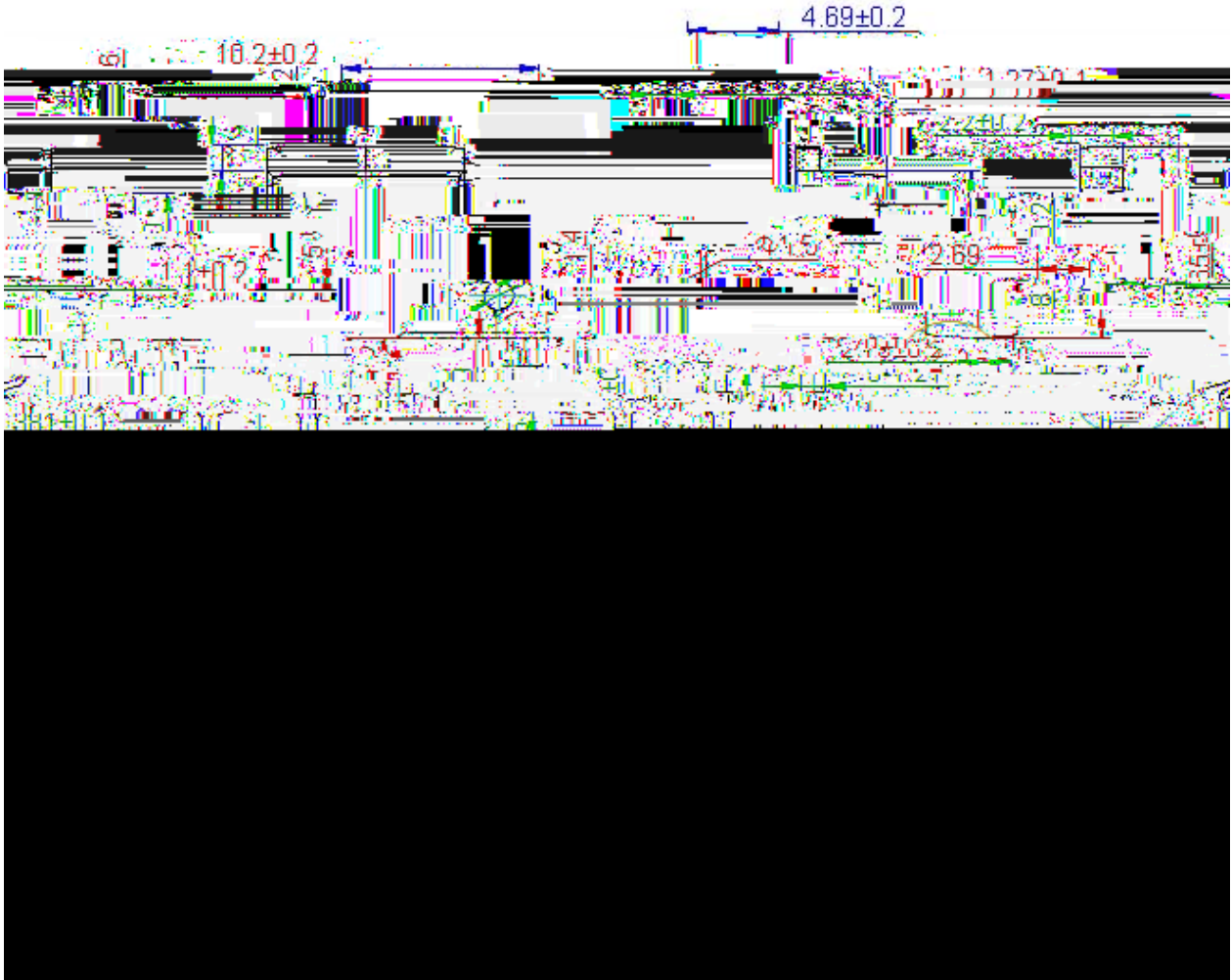
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width 40 ms

(3)

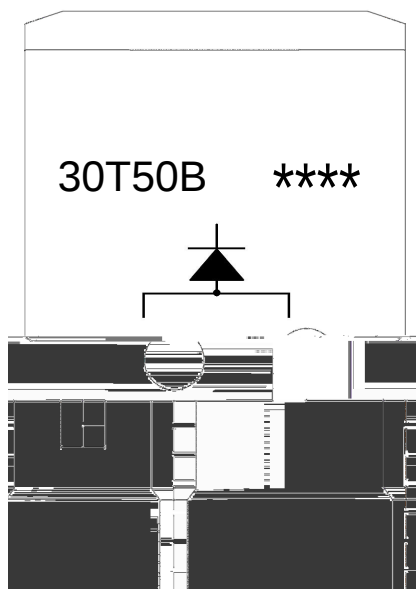
Unless otherwise noted, values for the parameters of a single chip

/ Package Dimensions



$\pm 0.15\text{mm}$ R 0.15mm

/ Marking Instructions



Note:

30T50B

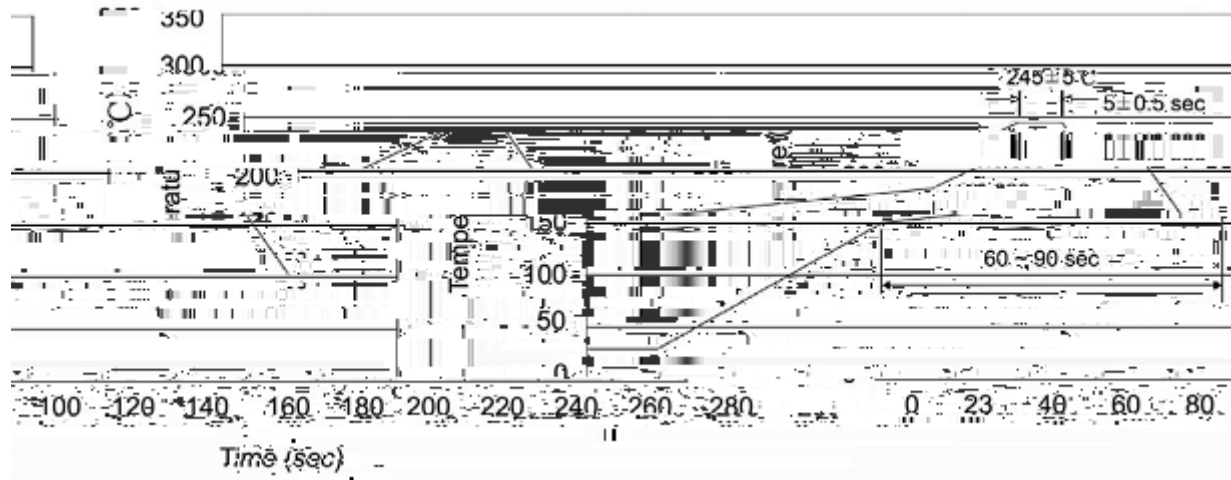
Product Type Code.



Internal Structure

Lot No. Code, code change with Lot No.

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

25 150

60 90sec;

1.Preheating:25~150 , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box